UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,079	12/08/2005	Janne Aaltonen	4208-4281	1085

85775 7590 09/16/2009

Locke Lord Bissell & Liddell LLP
Attn: IP Docketing
Three World Financial Center
New York, NY 10281-2101

EXAMINER	
PATEL, NIMESH	

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
09/16/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptopatentcommunication@lockelord.com

Office Action Summary	Application No.	Applicant(s)	
	10/560,079	AALTONEN, JANNE	
	Examiner	Art Unit	
	NIMESH PATEL	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 June 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13,16 and 18-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,16 and 18-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Jun. 26, 2009 for claims 1 - 13, 16 and 18 - 29 has been entered.

Response to Arguments

2. Applicant's arguments filed on Jun. 26, 2009, with respect to claims 1 – 13, 16 and 18 - 29 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1 – 13, 16, 18, and 22 - 29 are under 35 U.S.C. 103(a) as being unpatentable over Brandes US Patent: US 6,920,327 B1 Jul. 19, 2005, and in view of Durenbosch US PGPub: US 2004/0028009 A1 Feb. 12, 2004.

Regarding claim 1, Brandes discloses,

a method (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10. Mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64. Broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43), comprising the steps of:

selecting according to a predetermined criteria one of the available downlink radio signals (the computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43), and

changing to the selected available downlink radio signal for in part performing a handover (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43), so that said handover is only performed (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations –

ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) between a downlink of a digital generally bi-directional communications service (the switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64) and a digital generally unidirectional broadcast communications service (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 – 43).

Brandes briefly teaches, listening to available downlink radio signals (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 - 43),

But, is silent on, "wherein said handover is performed so that an uplink of the digital generally bi-directional communications service is maintained".

Durenbosch teaches, in detail searching for an appropriate connection, reads on the claimed feature, listening to available downlink radio signals. Searching 909 for the appropriate wireless IP connection may include one or more of determining that an available connection includes an access point and suitable services (Fig. 9/909, paragraph 0055).

For the claimed feature, wherein said handover is performed so that an uplink of the digital generally bi-directional communications service is maintained, Durenbosch teaches, setting up the second IP connection with the second IP address for the first station where the first IP connection is a primary connection and the second IP connection is a secondary connection with both existing concurrently (ABSTRACT, Fig. 9/907, paragraph 0055). With both existing concurrent connections, but data is only sent through one (Fig. 2, paragraph 0024).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the concurrent connections for IP connections and seamless handoff between the first and second IP connections (Durenbosch, ABSTRACT, Figs. 1 - 9, paragraphs 0024, 0055) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a

determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Regarding claim 2, Brandes discloses all the claimed features,

a method as claimed in claim 1, wherein the changing includes receiving a partial handover command (during an existing transmission of data using a first radio transmission system, a change in parameters causes that transmission to be rerouted onto a second radio transmission system, so that the customer experiences no loss during the transmission of data – Fig. 1, column 2, lines 35 – 40. Switching device 3 includes a computer according to allocate for transmitter/receiver station one or more appropriate radio transmission systems for a communication – Fig. 1, column 4, lines 36 – 39. Also, switching over by the computer, in the context of a subscriber profile, one of entirely and partially to another radio transmission system having a high transfer rate – ABSTRACT, Figs. 1, 2, column 1, lines 11 – 15, and claim 1).

Regarding claim 3, Brandes discloses,

a method as claimed in claim 2, wherein a terminal is adapted to listen to the downlink radio signal (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network

and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 7, lines 35 - 43), and to send a report on a listening result to a network element deciding the handover (the data concerning the subscriber profile and the transmission quality may be transmitted to the computer via an uplink form the mobile transmitter/receiver station, so that a signaling operation may be utilized to use these data for radio transmission system selection. The transmission quality may be measured using a signal field strength and/or an error rate – Figs. 1, 2, column 1, line 65 through column 2, line 14.Upon signaling, a subscriber profile that includes data about a service quality requested by the subscriber may be transmitted by transmitter/receiver station 10. These data include the transmission rate, a permissible error rate, maximum cost that the subscriber wished to incur for a transmission, and whether he or she wishes, for example, to transmit voice data or other data, e.g., a quality of data for transmission - column 5, lines 29 – 40, column 6, lines 4 – 9, column 6, lines 20 – 28, column 7, lines 17 – 25, column 7, lines 25 - 43).

Regarding claim 4, Brandes discloses,

a method according to claim 1, wherein said method comprises performing the

handover (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) from a digital broadband data communication domain to (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 - 64) a cellular mobile data communication domain (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43) or vice versa (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 5, Brandes discloses,

a method according to claim 1, wherein said method comprises selecting the downlink radio signal by means of a measurement signaling structure of inter-system handover of UMTS for the handover between said services (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 6, Brandes discloses,

a method according to claim 1, wherein said handover relates to a certain service remaining any other service transmitted via networks of said services still useable for a terminal (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver

stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43).

Regarding claim 7, Brandes discloses,

a method according to claim 1, wherein, in said method, the handover process is adapted to use a native network level signaling for application independent handover between said services (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 8, Brandes discloses,

a method according to claim 1, wherein said services are adapted to pertain to domains comprising a hybrid network system containing at least two functionally different network systems (transmission of data using radio transmission systems

between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10. Mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64. Broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

Regarding claim 9, Brandes discloses,

a method according to claim 1, wherein the method further comprises continuing unidirectional communication service reception in another cell area from current downlink communication received in a first cell area (during an existing transmission of data using a first radio transmission system, a change in parameters causes that transmission to be rerouted onto a second radio transmission system, so that the customer experiences no loss during the transmission of data – Fig. 1, column 2, lines 35 – 40. Switching device 3

includes a computer according to allocate for transmitter/receiver station one or more appropriate radio transmission systems for a communication – Fig. 1, column 4, lines 36 – 39. Also, switching over by the computer, in the context of a subscriber profile, one of entirely and partially to another radio transmission system having a high transfer rate – ABSTRACT, Figs. 1, 2, column 1, lines 11 – 15, and claim 1).

Regarding claim 10, Brandes discloses,

a method according to claim 1, wherein the digital generally unidirectional communications service pertains to a domain comprising DVB-T cells establishing a DVB-T network (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

Regarding claim 11, Brandes discloses,

a method according to claim 1, wherein the digital generally unidirectional communications service comprises a wireless multi-carrier signal transmission (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5,

DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

Regarding claim 12, Brandes discloses,

a method according to claim 1, wherein said services pertain to domains comprising cells of wireless cellular networks and the terminal is adapted to wirelessly communicate with said domains (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64. A computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 – 43).

Regarding claim 13, Brandes discloses,

an apparatus, comprising: a processor configured to perform the method according to claim 1 (transmission of data using radio transmission systems

between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 16, Brandes discloses,

an article of manufacture, comprising a computer readable medium containing computer readable program code configured to perform the method of claim 1 when run on a computer (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Regarding claim 18, Brandes discloses,

a method for performing a handover of a service (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio

transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) from a cellular mobile data communication domain (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 - 64) to a digital broadcast data communication domain (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43), the method comprising:

sending a measurement report of said received downlink radio signals to said cellular mobile data communication domain (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication. The computer may be part of the mobile transmitter/receiver station 10 – Figs. 1, 2, column 2, lines 9 – 14, column 2, lines 47 – 53, column 4,

lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 - 43),

reserving resources of the digital broadcast data communication domain by communicating between the cellular data communication domain and the digital broadcast data communication domain (the computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43),

sending a handover command to said terminal from the cellular mobile data communication domain (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43),

sending a confirmation from said terminal to the digital broadcast data communication domain **for moving the downlink service delivered via the cellular mobile data communication domain to the digital broadcast data communication domain** (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43), wherein, the handover (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) comprises a partial handover so that the signals and service relating to the downlink of the cellular mobile data communication are configured to be handed over (the switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64) to the

digital broadcast data communication domain (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 – 43).

Brandes briefly teaches, measuring received downlink radio signals of said domains at a terminal (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 9 – 14, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 - 43),

but, is silent on, "**sending a confirmation from said terminal to the digital broadcast data communication domain for** moving the downlink service delivered via the cellular mobile data communication domain to the digital broadcast data communication domain", and
"wherein said handover is performed so that an uplink of the cellular mobile data communication domain is maintained".

Durenbosch teaches, in detail searching for an appropriate connection, reads on the claimed feature, listening to available downlink radio signals. Searching 909 for the appropriate wireless IP connection may include one or more of determining that an available connection includes an access point and suitable services (Fig. 9/909, paragraph 0055). AP sends Reject 907 upon rejection of the service, also if the service is accepted the BTS is sending Setup (Q.931) 508 to MS (Figs. 4/405 - 407. and Fig. 5).

For the claimed feature, wherein said handover is performed so that an uplink of the cellular mobile data communication domain is maintained, Durenbosch teaches, setting up the second IP connection with the second IP address for the first station where the first IP connection is a primary connection and the second IP connection is a secondary connection with both existing concurrently (ABSTRACT, Fig. 9/907, paragraph 0055). With both existing concurrent connections, but data is only sent through one (Fig. 2, paragraph 0024).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the concurrent connections for IP connections and seamless handoff between the first and second IP connections (Durenbosch, ABSTRACT, Figs. 1 - 9, paragraphs 0024, 0055) for measuring the

transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Regarding claim 22, Brandes discloses,

a system for controlling a handover of a terminal (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) between a digital generally bi-directional communications service (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 - 64) and a digital generally unidirectional broadcast communications service (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43), comprising:

means for selecting according to a predetermined criteria between the available downlink radio signals (the computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43), and

means for changing to another available downlink radio signal for at least in part performing said handover (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 – 43),

so, the handover (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver

station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) is configured to be established between the downlink of the digital generally bi-directional communications service (the switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64) and the digital generally unidirectional broadcast communications service (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

Brandes briefly teaches, means for listening available downlink radio signals (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 - 43).

But, is silent on, "wherein said handover is performed so that an uplink of the

digital generally bi-directional communications service is maintained".

For the claimed feature, wherein said handover is performed so that an uplink of the digital generally bi-directional communications service is maintained, Durenbosch teaches, setting up the second IP connection with the second IP address for the first station where the first IP connection is a primary connection and the second IP connection is a secondary connection with both existing concurrently (ABSTRACT, Fig. 9/907, paragraph 0055). With both existing concurrent connections, but data is only sent through one (Fig. 2, paragraph 0024).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the concurrent connections for IP connections and seamless handoff between the first and second IP connections (Durenbosch, ABSTRACT, Figs. 1 - 9, paragraphs 0024, 0055) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Regarding claim 23, Brandes discloses,

a user terminal for adapting a handover of the terminal (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) between a digital generally bi-directional communications service (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 - 64) and a digital generally unidirectional communications service (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43), comprising:

said receiver further for receiving a handover command for changing to another available downlink radio signal (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between

transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43),

so that said handover is performed (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) between a downlink of a digital generally bi-directional communications service (the switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64) and a digital generally unidirectional broadcast communications service (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

Brandes briefly teaches, a receiver for measuring available downlink radio

signals, and a transceiver for transmitting the measurements (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 - 43),

but, is silent on, "said transceiver further for transmitting a confirmation for in part performing said handover", and
"wherein said handover is performed so that an uplink of the digital generally bi-directional communications service is maintained".

For the claimed feature, said transceiver further for transmitting a confirmation for in part performing said handover, Durenbosch teaches, in detail searching for an appropriate connection. Searching 909 for the appropriate wireless IP connection may include one or more of determining that an available connection includes an access point and suitable services (Fig. 9/909, paragraph 0055).
AP sends Reject 907 upon rejection of the service, also if the service is accepted the BTS is sending Setup (Q.931) 508 to MS (Figs. 4/405 - 407. and Fig. 5).

For the claimed feature, wherein said handover is performed so that an uplink of the digital generally bi-directional communications service is maintained, Durenbosch teaches, setting up the second IP connection with the second IP address for the first station where the first IP connection is a primary connection and the second IP connection is a secondary connection with both existing concurrently (ABSTRACT, Fig. 9/907, paragraph 0055). With both existing concurrent connections, but data is only sent through one (Fig. 2, paragraph 0024).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the concurrent connections for IP connections and seamless handoff between the first and second IP connections (Durenbosch, ABSTRACT, Figs. 1 - 9, paragraphs 0024, 0055) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Regarding claim 24, Brandes discloses,

a network entity for controlling a handover of a service (transmission of data

using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) between a digital generally bi-directional communications domain (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 - 64) and a digital generally unidirectional broadcast communications domain (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43), comprising:

means for selecting according to a predetermined criteria between the available radio signals (the computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43), and

means for changing to another available downlink radio signal for at least in part performing said handover (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43), so that said handover is performed (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) between a downlink of a digital generally bi-directional communications service (the switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64) and a digital generally unidirectional broadcast communications service (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only

transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

Brandes briefly teaches, means for receiving a measurement about available downlink radio signals (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 - 43).

But, is silent on, "wherein said handover is performed so that an uplink of the digital generally bi-directional communications domain is maintained".

For the claimed feature, wherein said handover is performed so that an uplink of the digital generally bi-directional communications service is maintained, Durenbosch teaches, setting up the second IP connection with the second IP address for the first station where the first IP connection is a primary connection and the second IP connection is a secondary connection with both existing concurrently (ABSTRACT, Fig. 9/907, paragraph 0055). With both existing concurrent connections, but data is only sent through one (Fig. 2, paragraph

0024).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the concurrent connections for IP connections and seamless handoff between the first and second IP connections (Durenbosch, ABSTRACT, Figs. 1 - 9, paragraphs 0024, 0055) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Regarding claim 25, Brandes discloses,

a method as claimed in claim 1, wherein uplink can be maintained when said partial handover is performed (if the transmission quality for a radio transmission system used by transmitter/receiver station 10 declines sharply, a handover to an alternative radio transmission system may automatically be performed, if possible. The data flow that is being exchanged between transmitter/receiver station 10 and the respective radio transmission system device is then handed over to the new radio transmission system device, so that no data loss occurs – column 6, lines 20 – 28, column 7, lines 1 – 6).

Regarding claim 26, Brandes discloses,

a method as claimed in claim 1, wherein the partial handover relates only to downlink radio communications (the data flow that is being exchanged between transmitter/receiver station 10 and the respective radio transmission system device is then handed over to the new radio transmission system device, so that no data loss occurs – column 6, lines 20 – 28, column 7, lines 1 – 6. The broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

Regarding claim 27, Brandes discloses,

a method as claimed in claim 26, wherein the partial handover relates (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) only to downlink radio communications of the

generally bi-directional communications service (the switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64) and the generally unidirectional broadcast communications service (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43).

Regarding claim 28, Brandes discloses,

a method as claimed in claim 1, wherein the partial handover (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) is configured to be related to the service between a transmission of the generally unidirectional broadcast communications service (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column

7, lines 35 - 43) and a transmission of the downlink of the generally bi- directional communications service (the switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64).

Regarding claim 29, Brandes discloses all the claimed features,

but, is silent of, a method as claimed in claim 1, further comprising "maintaining on a basis of said uplink bidirectional interaction channel to the digital generally unidirectional broadcast communication service".

For the claimed feature, maintaining on a basis of said uplink bidirectional interaction channel to the digital generally unidirectional broadcast communication service, Durenbosch teaches, setting up the second IP connection with the second IP address for the first station where the first IP connection is a primary connection and the second IP connection is a secondary connection with both existing concurrently (ABSTRACT, Fig. 9/907, paragraph 0055). With both existing concurrent connections, but data is only sent through one (Fig. 2, paragraph 0024).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data

transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the concurrent connections for IP connections and seamless handoff between the first and second IP connections (Durenbosch, ABSTRACT, Figs. 1 - 9, paragraphs 0024, 0055) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Claims 19 - 21 are under 35 U.S.C. 103(a) as being unpatentable over Brandes US Patent: US 6,920,327 B1 Jul. 19, 2005, and in view of Durenbosch US PGPub: US 2004/0028009 A1 Feb. 12, 2004, and further in view of Grilli US PGPub: US 2003/0002525 A1 Jan. 2, 2003.

Regarding claim 19, Brandes discloses,

a method according claim 18, further comprising communicating in such a way that the cellular mobile data communication domain requests resources from the digital broadcast data communication domain (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver

station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10).

Both Brandes and Durenbosch discloses all the claimed feature,

but, are silent on, "**obtaining an acknowledgement on available resources** of the digital broadcast data communication domain at the cellular data communication domain".

Grilli teaches, in detail the signaling performed while handover in hybrid network, wherein a mobile station measures and reports on the strength of signals received from a base station transceiver in a neighboring cell before being handed over that cell and the mobile station is handed over from the first to the second base station. Upon receiving handover command 1517 the UE/MS 1505 sends handover complete message 1521 (ABSTRACT, Figs., 1, 4B/HO REQUEST ACK, 9/HO REQUEST ACK, 15, paragraphs 0014, 0272 - 0281).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission combined Brandes and Durenbosch (combined Brandes and Durenbosch, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1,

10), would have been incorporated the detailed signaling messages between base station and UE/MS (Grilli, Figs. 1, 15, paragraph 0014) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Regarding claim 20, Brandes discloses,

a method for performing a handover of a service (transmission of data using radio transmission systems between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) from a digital broadcast data communication domain (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43) to a cellular mobile data communication domain (mobile radio networks with duplex operation – Fig. 1, column 3, lines 33 – 51. The switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T

device 7 - column 4, lines 63 - 64), the method comprising:

sending a measurement report of said received downlink radio signals to said digital broadcast data communication domain (a computer may receive from a transmitter/receiver station, in a switching device that controls access to a communication network and receives and sends data via radio transmission, data that the computer then evaluates in order to allocate to the transmitter/receiver station appropriate radio transmission systems for a communication – Figs. 1, 2, column 2, lines 47 – 53, column 4, lines 13 – 21, column 4, lines 36 – 43, column 5, lines 20 – 40, column 6, lines 4 – 13, column 6, lines 20 – 28, column 7, lines 35 - 43), reserving downlink resources of the cellular mobile data communication domain by communicating between the digital broadcast data communication domain and the cellular mobile data communication domain (the computer in switching device 3 calculates on the basis of the subscriber profile which service of a radio transmission system is the cheapest, and selects that service if the availability and speed of the transmitter/receiver station permit it – Fig/ 2/14, column 2, lines 47 – 53, column 6, lines 37 – 58, column 7, lines 35 - 43),

sending a handover command to said terminal from the digital broadcast data communication domain (if the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected

at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43), and

sending a conformation from said terminal to the cellular mobile data communication domain for **moving the downlink service delivered via the digital broadcast data communication domain to the downlink of the cellular mobile data communication domain** (it the selected radio transmission does not meet the subscriber profile criteria at step 15, a new transmission system may be selected at step 14. Also, if the network capacity utilization is too high at step 17, a new transmission system may be selected at step 14. If this happened during a data transmission, the data flow that is being exchanged between transmitter/receiver stations 10 and the respective radio transmission system, is then handed over to the new radio transmission system device, so that no data loss occurs - Figs. 1, 2, column 2, lines 47 – 53, column 6 line 59 through column 7, line 6, column 7, lines 35 - 43),

wherein, the handover (transmission of data using radio transmission systems

between transmitter/receiver stations, selecting radio transmission systems dynamically, for a communication from at least one transmitter/receiver station, on the basis of a subscriber profile, a location of the one transmitter/receiver station, and/or a speed of the transmitter/receiver station, in order to transmit data between transmitter/receiver stations – ABSTRACT, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10) comprises a partial handover so that signals and service relating to the digital broadcast data communication domain (broadcast distribution systems have only a downlink – column 3, line 51 through column 4, line 13. The switching device 3 only transmits data to DAB device 5, DVB-T device 8, DVB-S device 9 and DRM device 10 – column 4, lines 65 – 66, column 7, lines 35 - 43) are configured to be handed over to the downlink of the cellular mobile data communication domain (the switching device 3 sends and receives data to and from UMTS-S device 4, GSM device 6 and UMTS-T device 7 - column 4, lines 63 – 64),

but, is silent on, "measuring received downlink radio signals of said domains at a terminal", and "wherein said handover is performed so that an uplink of the cellular mobile data communication domain is maintained".

For the claimed feature, wherein said handover is performed so that an uplink of the cellular mobile data communication domain is maintained, Durenbosch teaches, setting up the second IP connection with the second IP address for the

first station where the first IP connection is a primary connection and the second IP connection is a secondary connection with both existing concurrently (ABSTRACT, Fig. 9/907, paragraph 0055). With both existing concurrent connections, but data is only sent through one (Fig. 2, paragraph 0024).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission (Brandes, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the concurrent connections for IP connections and seamless handoff between the first and second IP connections (Durenbosch, ABSTRACT, Figs. 1 - 9, paragraphs 0024, 0055) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Both Brandes and Durenbosch discloses all the claimed feature,

but, are silent on, "**sending a confirmation from said terminal to the digital broadcast data communication domain for** moving the downlink service delivered via the downlink of the cellular mobile data communication domain to the digital broadcast data communication domain".

Grilli teaches, in detail the signaling performed while handover in hybrid network, wherein a mobile station measures and reports on the strength of signals received from a base station transceiver in a neighboring cell before being handed over that cell and the mobile station is handed over from the first to the second base station. Upon receiving handover command 1517 the UE/MS 1505 sends handover complete message 1521 (ABSTRACT, Figs., 1, 4B/HO REQUEST ACK, 9/HO REQUEST ACK, 15, paragraphs 0014, 0272 - 0281).

It would have been obvious to one of ordinary skill in the art, at the time of invention, to modify allocation of radio transmission systems for data transmission combined Brandes and Durenbosch (combined Brandes and Durenbosch, Figs. 1, 2, column 2, line 65 through column 7, line 43, claims 1, 10), would have been incorporated the detailed signaling messages between base station and UE/MS (Grilli, Figs. 1, 15, paragraph 0014) for measuring the transmission quality using a signal field strength and/or an error rate, and allow a determination to be made as to the transmission quality of a radio transmission system (Brandes, column 2, lines 9 - 14).

Regarding claim 21, it is similar to claim 19 above and is rejected on the same grounds.

Contact Information

Any inquiry concerning this communication from the examiner should be directed to Nimesh Patel at (571) 270-1228, normally reached on Mon-Thur. 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael, Perez-Gutierrez, can be reached at (571) 272-7915.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR of Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nimesh Patel/

/Rafael Pérez-Gutiérrez/

Supervisory Patent Examiner, Art Unit 2617